

## REMARKS

Claim 33 has been cancelled. Claims 1 and 8-29 have been amended, and claims 65-82 have been newly added. Claims 1-32, 34, and 65-82 are now pending in the application. (Claims 35-64 were previously cancelled.) Applicant respectfully requests reexamination and reconsideration of the application as amended.

Generally speaking, the claims in the present application relate to integrated circuits. As is known, an integrated circuit typically comprises tiny electric circuits formed on a semiconductor material. Again generally speaking, relatively large bond pads on the integrated circuit are the only means provided for making electrical connections between elements external to the integrated circuit and the tiny electric circuits of the integrated circuit. Because few of the nodes in the tiny circuits of the integrated circuit are directly connected to the bond pads, only a few of the nodes of the circuit can be directly accessed or monitored. In one of its aspects, the present invention remedies this situation by providing special contact pads on the integrated circuit for directly accessing nodes internal to the tiny circuits of the integrated circuit.

Claims 1-34 have been rejected in view of one or more of US Patent No. 5,506,499 to Puar et al. ("Puar"), US Patent No. 6,373,143 to Bell ("Bell"); US Patent No. 6,054,0334 to Ma ("Ma"); US Patent No. 6,080604 to Waki ("Waki"); US Patent No. 5,613,861 to Smith ("Smith"); and US Patent No. 6,078,083 to Amerasekera ("Amerasekera"). Applicant respectfully traverses these rejections.

Independent claim 1 describes the circuitry of an integrated circuit comprising two parts. Bond pads "for interfacing the circuitry with an external circuit" are "directly coupled to the first part of the circuitry." A "special contact pad" is "directly coupled to the second part of the circuitry."

In contrast, in Puar, the auxiliary pad 60 is connected directly to the primary bond pad 58. (See, Puar, Figure 9.) Thus, the auxiliary pad 60 and the primary bond pad 58 are not directly connected to different parts of the circuitry in the integrated circuit. Similarly, in Bell, the probe pad 32 is connected directly to the bond pad 37 (see Bell, Figure 5), and, thus, the probe pad 32 and the bond pad 37 are likewise not directly connected to different parts of the circuitry in the integrated circuit. Therefore, independent claim 1 (and its dependent claims) patentably distinguish over Puar, Bell, and the other references of record.

Moreover, it should be noted that the above described distinction provides advantages not found in Puar or Bell. For example, the special contact pad in claim 1 of the instant application allows direct access to a part of the circuitry that the bond pad does not allow direct access to. In contrast, neither the auxiliary pads 60 of Puar nor the probe pads 32 of Bell allow direct access to any part of circuits 50, 52, or 54 that primary bond pads 58 do not also allow direct access to.

Claim 8 describes an integrated circuit having a first circuit and a second circuit. A bond pad is coupled to the first circuit, and a special contact pad is coupled to the second circuit. The special contact pad is smaller than the bond pad.

As discussed above, in Puar, the auxiliary pad 60 is connected directly to the primary bond pad 58, so that both the auxiliary pad 60 and the bond pad 58 are connected directly to the same internal circuit of the integrated circuit. The same is true of Bell. Therefore, independent claim 8 (and its dependent claims) patentably distinguish over Puar, Bell, and the other references of record.

Independent claim 29 describes an integrated circuit in which a special contact pad provides access directly to an internal circuit to which larger bond pads do not provide direct access. Again, as discussed above, the auxiliary pad 60 of Puar and the probe pad 32 of Bell provide access to the same circuitry as the bond pads (58 of Puar and 37 of Bell). Therefore, independent claim 29 (and its dependent claims) patentably distinguish over Puar, Bell, and the other references of record.

Newly added independent claims 65, 72, and 77 also distinguish over Puar, Bell, and the other references of record. Therefore, newly added claims 65-81 are also patentable over Puar, Bell, and the other references of record.

Although Applicants believe that all necessary extensions of time and fees have been provided for in papers filed with this Amendment, Applicants petition the Director for any extension of time deemed necessary for acceptance of this paper, and Applicants authorize the Director to charge any fee deemed necessary for acceptance of this paper to Deposit Account No. 50-0285 (order no. P60D1-US).

Respectfully submitted,

By:   
N. Kenneth Burraston  
Registration No. 39,923

Date: February 24, 2003

FormFactor, Inc.  
Legal Department  
2140 Research Dr.  
Livermore, CA 94550  
925-456-3915  
925-294-8147 Fax